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TITLE : CALCIUM PHOSPHATE BASED COMPOUND HAVING PLATELIKE GRAIN
STRUCTURE PROVIDED WITH OPENING AND ITS PRODUCTION

ABSTRACT : PROBLEM TO BE SOLVED: To produce a compound having a porous platelike grain structure and uniform grain size by dropwise adding phosphoric acid to a calcium carbonate aqueous suspension, in the production process.

SOLUTION: This production process of a compound comprises dropwise adding phosphoric acid, alone or in the presence of a third substance capable of forming a complex, to a calcium carbonate aqueous suspension having a 1-40 wt.% concentration, in a 90-180 mol% ratio of phosphoric acid to calcium carbonate, to produce the objective calcium phosphate based compound which has 1-100 μm grain size and each of the grains of which has an opening having a 0.1-90 μm opening size, wherein as the third substance, an organic acid such as tartaric acid or citric acid, or its salt, or any one of appropriate organic amines, such as ethylenediamine or diethyltriamine, is added to the calcium carbonate aqueous suspension in a 1-5 mol% ratio to calcium carbonate. Further, the platelike calcium carbonate based compound thus produced is, if necessary, subjected to advanced purification by immersing the compound in a weakacidic solution such as acetic acid solution or washing the compound with the solution. The compound which has such platelike grain structure as to exhibit smoothness and glossiness and also in each of the grains of which an opening is formed, therefore, is utilized as a porous substance having a function effective in supporting/slow-releasing medicines, agricultural chemicals or the like, and an adsorption function effective in deodorization, drying, or the like.

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